APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/276,917	03/26/1999	KARTIK S CHANDRAN	CISCP100	2820

22434 7590 03/10/2005	EXAMINER	
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ART UNIT	PAPER NUMBER
2154	

DATE MAILED: 03/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	09/276,917	CHANDRAN ET AL.
	Examiner	Art Unit	
	Dustin Nguyen	2154	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>31 March 2004</u>.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-28 and 30</u> is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-28 and 30</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All   b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
   Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date _____.
5)☐ Notice of Informal Patent Application (PTO-152)
6)☐ Other: _____.

U.S. Patent and Trademark Office

PTOL-326 (Rev. 1-04)   Office Action Summary   Part of Paper No./Mail Date 03062005

DETAILED ACTION

1.   Claims 1 – 28, and 30 are presented for examination.

Response to Arguments

2.   Applicant's arguments filed 03/31/2004 have been fully considered but they are not

persuasive.

3.   As per remarks, Applicants' argued that (1) it is not seen how Sriram patent discloses a

system in which a queue is set to dequeue all of its contents at a particular time.

4.   As to point (1), Sriram discloses dequeue all of its contents at a particular time [i.e.

transmit cells until queue is empty] [68, Figure 7; and col 9, lines 33-36]. Furthermore, Bass

teaches service all high priority queue first follow by the low priority queue [col 5, lines 65-col

6, lines 3].

Claim Rejections - 35 USC § 103

5.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person

> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6.   Claims 1 – 28, and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Bass et al. [US Patent No 6,052,375], in view of Sriram [US Patent No 5,463,620].

7.   As per claim 1, Bass discloses substantially the invention as claimed including the

apparatus comprising:

one or more processors [1, Figure 1, and col 3, line 53-60];

memory coupled to at least one of the one or more processors [10, Figure 2; col 4, line 3-

7];

a plurality of time-based queues logically configured on the memory [10, Figure 2] and

together defining a period of time with each time-based queue defining a separate increment of

time within the period of time [col 4, line 55-58 and col 4, line 62-65];

wherein the processor is configured or designed to direct (i) data or (ii) grants to transmit

data to particular time-based queues based upon network traffic shaping delays prescribed for the

data or grants to transmit the data [col 6, line 18-29]

Bass does not disclose specifically teach that each time-based queue is set to dequeue all

of its contents at a separate time.

Sriram discloses the system that teaches each time-based queue is set to dequeue all of

its contents at a separate time [col 6, line 20-31].

It would have been obvious to a person skill in the art at the time the invention was made

to combine the teaching of Bass and Sriram because Sriram's different time for dequeue would

allow Bass system to be more flexible and efficient to accommodate different types of data and traffic [Sriram, Abstract, lines 20-26].

8.   As per claim 2, Bass discloses the apparatus is a router [col 1, line 57-59].

9.   As per claim 3, Bass discloses the apparatus is a cable modem termination system [Figure 7].

10.   As per claim 4, Sriram teaches the separate increments of time defined by the time-based queues are each of the same length [col 3, line 64-col 4, line 8 and col 6, line 50-52].

11.   As per claim 5, Bass teaches the separate increments of time defined by the time-based queues are configurable [col 4, line 56-57].

12.   As per claim 6, Bass teaches the periods of time defined by the plurality of time-based queues are configurable [col 4, line 17-23].

13.   As per claim 7, Bass discloses the one or more processors are further configured or designed to determine network traffic shaping delay [col 6, line 10-13].

14.   As per claim 8, Bass teaches the one or more processors are further configured or designed to discard data or a request to grant transmission of data if a network traffic delay is

greater than the period of time defined by the plurality of time-based queues [col 5, line 13-24 and col 6, line 10-12].

15.   As per claim 9, Sriram discloses the one or more processors are further configured or designed to transmit, without buffering in a time-based queue, the data or issue grants to transmit data if there is no network traffic shaping delay [Figure 7; col 9, line 25-50].

16.   As per claim 10, Bass teaches the one or more processors are further configured or designed to direct network packets of varying sizes to the time-based queues [col 2, line 66-67].

17.   As per claim 11, Sriram teaches the apparatus is configured or designed to simultaneously buffer, in a single time-based queue, data or grant to transmit data from a plurality of network nodes [col 2, line 64-col 3, line 8; Figure 5].

18.   As per claim 12, it is rejected for similar reasons as stated above in claim 1. Further more, Bass teaches traffic shaping means for determining how long to buffer data or grants to transmit data [claim 1, line 4-9].

19.   As per claim 13, Bass discloses the traffic shaping means also directs the data or grant to transmit data to particular time-based queues based upon a determined length of time for buffering [col 3, line 62-64].

20.   As per claim 14, Bass discloses a policing means for determining whether to buffer the

data or grants to transmit data [7, Figure 1].

21.   As per claim 15, Bass discloses substantially the invention as claimed including the

method comprising:

determining that transmitting additional data to or from a network node will or will likely

exceed a maximum allowed data flow for the network node [col 2, line 56-64 and col 6, line 44-

45].

selecting one of a plurality of time-based queues that together defined a period of time,

with each time-based queue defining a separate increment of time within the period of time [col

4, line 55-58 and col 4, line 62-col 5, line 4];

buffering the additional data or a grant to transmit the additional data in the selected one

of the plurality of time-based queues [col 5, line 18-19].

Bass does not disclose specifically teach that each time-based queue is set to dequeue its

contents at a separate time associated with its increment of time.

Sriram discloses a system that teaches each time-based queue is set to dequeue its

contents at a separate time associated with its increment of time [col 6, line 20-31].

It would have been obvious to a person skill in the art at the time the invention was made

to combine the teaching of Bass and Sriram because Sriram's different time for dequeue would

allow Bass system to be more flexible and efficient to accommodate different types of data and

traffic [Sriram, Abstract, lines 20-26].

22.   As per claim 16, Sriram teaches the apparatus above further comprising receiving data

addressed to the network node prior to determining that transmitting additional data will or will

likely exceed the maximum allowed data flow, and wherein the data addressed to the network

node is the additional data [col 10, line 1-16].

23.   As per claim 17, Sriram teaches the apparatus comprising receiving data sent by the

network node prior to determining that transmitting the additional data will or will likely exceed

the maximum allowed data flow, and wherein the data sent by the node is the additional data [

col 10, line 16-26].

24.   As per claim 18, Sriram discloses the calculating a network capacity used by the network

node if the additional data was to be transmitted, the calculation being performed prior to

determining that transmitting the additional data will or will likely exceed the maximum allowed

data flow [col 7, line 30-50].

25.   As per claim 19, Sriram discloses the information of determining a delay until the

additional data can be transmitted, wherein the determined delay is used to select the time-based

queue [col 5, line 7-34].

26.   As per claim 20, Sriram discloses the time-based queue is selected by matching its time

to dequeue with the delay determined for the additional data [col 6, line 50-52].

27.   As per claim 21, Sriram discloses the limitation of:

dequeuing the additional data [claim 20 and col 9, line 29-35]; and

transmitting the additional data without exceeding the maximum allowed data flow for

the network [col 9, line 9-12].

28.   As per claim 22, it is rejected for similar reasons as stated above in claims 8, 15, and 19.

Furthermore, Bass discloses receiving new data that does not form part of the additional data [

col 7, line 58-65].

29.   As per claim 23, it is rejected for similar reason as stated above in claim 5.

30.   As per claim 24, it is rejected for similar reasons as stated above in claims 6 and 7.

31.   As per claims 25, 28 and 30, they are apparatus of claim 15, they are rejected for similar

reasons as stated above in claim 15.

32.   As per claim 26, it is rejected for similar reason stated above in claim 18.

33.   As per claim 27, it is rejected for similar reasons as stated above in claim 22.

34. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the mailing

date of this final action.

Conclusion

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Dustin Nguyen whose telephone number is (703) 305-5321. The

examiner can normally be reached on flex.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Follansbee John can be reached on (703) 305-8498. The fax phone number for the

organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JOHN FOLLANSBEE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100

Dustin Nguyen
Examiner
Art Unit 2154